CLAIMS

What is claimed is:

1. A tool for performing end-to-end anastomosis between two tissue structures each having at least two flaps at one end, comprising:

two clamps moveable relative to one another, each clamp configured to hold the end of one tissue structure and to hold the flaps of that tissue structure.

2. The tool of claim 1, wherein each clamp further comprises a tissue preparation device.

3. The tool of claim 1, further comprising a jig, wherein each clamp is connected to said jig.

4. The tool of claim 3, wherein at least one said clamp is fixed to said jig.

5. The tool of claim 3, wherein said jig comprises at least one rail, and at least one said clamp is slidably connected to at least one said rail.

6. The tool of claim 3, further comprising a handle connected to each clamp, wherein said handle is configured to urge at least one said clamp relative to said jig.

7. The tool of claim 3, wherein one said clamp further comprises at least one alignment boss, and wherein the other said clamp comprises at least one boss receiver defined therein.

8. The tool of claim 7, wherein each said alignment boss is substantially tubular.

9. The tool of claim 1, further comprising at least one clip connected to at least one clamp, wherein each said clip is moveable between an open position and a closed position.

10. The tool of claim 1, wherein at least one clamp comprises at least one connector deployer configured to deploy a connector through two abutting flaps.

11. The tool of claim 10, wherein each said connector is a staple.

12. The tool of claim 10, wherein at least one clamp comprises an actuator configured to actuate at least one said connector deployer.

13. The tool of claim 12, further comprising a channel defined in at least one said clamp, wherein said actuator is movable through said channel relative to at least one said connector deployer.

14. The tool of claim 1, wherein a first clamp comprises at least one connector deployer, and a second clamp comprises at least one connector receiver corresponding to said connector deployer on said first clamp.

15. The tool of claim 1, wherein each clamp comprises a first arm and a second arm moveable between an open position and a closed position.

16. The tool of claim 15, further comprising a clamping lever movably connected to at least one said clamp, wherein motion of said clamping lever to a predetermined position locks said first arm and said second arm into said closed position.

17. The tool of claim 1, wherein each clamp comprises a passage defined therein; further comprising a finger moveable between said clamps through said passages.

18. The tool of claim 1, wherein each said clamp further comprises at least one tissue knife configured for cutting at least one flap.

19. A tissue preparation device, comprising:

a first pin; and

a measuring feature fixed relative to said pin.

20. The tissue preparation device of claim 19, wherein said measuring feature is a second pin spaced a fixed distance apart from said first pin.

21. The tissue preparation device of claim 19, further comprising a surface connected to said pin, wherein said measuring feature is at least one marking on said surface.

22. A method for performing end-to-end anastomosis between two tissue structures, comprising:

creating at least two flaps at the end of each tissue structure;

pressing each flap of one tissue structure into contact with at least one

corresponding flap of the other tissue structure; and

connecting the flaps to one another.

23. The method of claim 22, further comprising selecting an interface dimension; wherein said creating is based on said interface dimension.